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JAN 28 2008

REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are in allowable form.

I. REJECTION OF CLAIMS 1-11, 23-36, AND 48-64 UNDER 35 U.S.C. § 102

Claims 1-11, 23-36, and 48-64 stand rejected as being anticipated by the Agarwal et al. application (U.S. Patent Application Publication No. 2004/0179486, published September 16, 2004, hereinafter referred to as "Agarwal"). In response, the Applicants have amended independent claims 1, 26, and 51 in order to more clearly recite aspects of the present invention.

In particular, the Applicants submit that Agarwal fails to teach, show or suggest the novel invention of examining the body substring of a datagram to determine, based on the contents of the body substring, whether the substring matches a substring of interest, as recited in the Applicants' independent claims 1, 26, and 51.

By contrast, Agarwal merely teaches a method for reconstructing segmented packets transmitted over a network using header information (e.g., sequence numbers, source information, and destination information). In other words, the system taught by Agarwal is unconcerned with the body (i.e., data contents) of the packet segments, as it is not needed to determine the order of the packet segments. For instance, the portion of Agarwal that that Examiner cites to support the teaching of "applying an automaton ... having a list of substrings of interest to content of said substring to determine whether said substring matches one of said substrings of interest" at most teaches the use of bits in a packet header to indicate whether a received segment is a first (F bit) or last (L bit) segment in a segmented packet.

In addition, the Applicants respectfully submit that Agarwal teaches against Applicants' invention. Using the system of Agarwal leads to reconstruction of the original information from segmented packets – a costly requirement that Applicants' invention actually seeks to avoid. In contrast, Applicants' system determines the

10/800,890

presence of a string of interest without reconstruction as taught by Agarwal (See, Applicants' Specification at pages 1-2 (Background of the Invention), and especially at paragraph [0004]).

Notably, Applicants' invention positively claims the step of applying an automaton having a list of substrings of interest to the body substring of a datagram, in order to determine whether the received substring matches a substring of interest, as claimed in Applicants' independent claims 1, 26 and 51. Examining the body substring of the received datagram for data content facilitates a variety of data analysis techniques, including intrusion detection, packet filtering, load balancing, routing, and other network related operations that make decisions based on the contents of substrings. Specifically, Applicants' claims 1, 26 and 51 positively recite:

1. A method for detecting a substring of interest from a plurality of datagrams that arrives out-of-order, comprising:
receiving a datagram, the datagram comprising a body substring and a header with an index;
determining whether a preceding span exists in a span set;
determining whether a succeeding span exists in said span set; and
applying an automaton having a list of substrings of interest to the body substring of said datagram to determine whether said substring matches one of said substrings of interest. (Emphasis added)

26. An apparatus for detecting a substring of interest from a plurality of datagrams that arrives out-of-order, comprising:
means for receiving a datagram, the datagram comprising a body substring and a header with an index;
means for determining whether a preceding span exists in a span set;
means for determining whether a succeeding span exists in said span set;
and
means for applying an automaton having a list of substrings of interest to the body substring of said datagram to determine whether said substring matches one of said substrings of interest. (Emphasis added)

51. A computer-readable medium having stored thereon a plurality of instructions, the plurality of instructions including instructions which, when executed by a processor, cause the processor to perform the steps of a method for detecting a substring of interest from a plurality of datagrams that arrives out-

10/800,890

of-order, comprising of:

receiving a datagram, the datagram comprising a body substring and a header with an index;

determining whether a preceding span exists in a span set;

determining whether a succeeding span exists in said span set; and

applying an automaton having a list of substrings of interest to the body substring of said datagram to determine whether said substring matches one of said substrings of interest. (Emphasis added)

As discussed above, the system of Agarwal is completely devoid of any teaching or even suggestion relating to the desirability of examining the body of a data packet (or segment thereof). Thus, the Applicants respectfully submit that claims 1, 26 and 51 fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder.

Claims 2-11, 23-25, 27-36, 48-50, and 52-64 depend from independent claims 1, 26, and 51 and recite additional features. As such, and for at least the same reasons stated above with respect to claims 1, 26, and 51, the Applicants respectfully submit that claims 2-11, 23-25, 27-36, 48-50, and 52-64 also fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder.

II. REJECTION OF CLAIMS 12-22 and 37-47 UNDER 35 U.S.C. § 103

Claims 12-22 and 37-47 stand rejected as being made obvious by Agarwal. The Applicants respectfully traverse the rejection.

As discussed above, Agarwal fails to teach, show or suggest the novel invention of examining the body of a substring (e.g., a string, a packet, a segment, or the like) to determine, based on the body substring, whether the substring matches a substring of interest, as recited in the Applicants' independent claims 1 and 26. Thus, the Applicants respectfully submit that claims 1 and 26 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Claims 12-22 and 37-47 depend from independent claims 1 and 26 and recite additional features. As such, and for at least the same reasons stated above with respect to claims 1 and 26, the Applicants respectfully submit that claims 12-22 and 37-47 also fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

10/800,890

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JAN 28 2008

III. CONCLUSION

Thus, the Applicants submit that all of the presented claims fully satisfy the requirements of 35 U.S.C. §102 and 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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